U.S. Department
of Transportation

**Pipeline and
Hazardous Materials
Safety Administration**

IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIALS
CERTIFICATE USA/0161/S-96, REVISION 4

**East Building, PHH-23
1200 New Jersey Avenue SE
Washington, D.C. 20590**

This certifies that the sources described have been demonstrated to meet the regulatory requirements for special form radioactive material as prescribed in the regulations of the International Atomic Energy Agency[1] and the United States of America[2] for the transport of radioactive material.

1. Source Identification - New England Nuclear Models NER-550 and NER-560-A.

2. Source Description - The sources described by this certificate are TIG welded doubly encapsulated sources constructed of Type 316L stainless steel. The Model NER-550 has a diameter of 7.0 mm (0.275 in.) to 25.4 mm (1.0 in.), and length 9.53 mm (0.375 in.) to 38.1 mm (1.5 in.). The Model NER-560-A has a diameter of 12.7 mm (0.5 in.), and length 17.15 mm (0.675 in.), with an additional 9.5 mm (0.375 in.) long threaded stud on the welded endcap. Minimum wall thickness of all inner and outer capsules is 0.635 mm (0.025 in.) and minimum plug thickness for each capsule is 1.27 mm (0.05 in.). Source construction must be in accordance with attached New England Nuclear Corporation Drawing No. 313-26, Rev. A (Model NER-550), or Model NER-560-A (Model NER-560-A).

3. Radioactive Contents - For the Model NER-550, not more than 37 GBq (1.0 Ci) of Americium-241. For the Model NER-560-A, not more than 2.22 GBq (60 mCi) of Americium-241 and 0.407 GBq (11 mCi) of Cesium-137. The Am-241 is in the form of americium oxide, mixed with beryllium powder and compressed into a pellet. The Cs-137 is in the form of CsCl in a glass fiber.

4. Special Condition - Model NER-560-A sources must be installed in NIC-5 moisture density gauges being transported for disposal purposes only.

5. Quality Assurance - Records of Quality Assurance activities required by Paragraph 310 of the IAEA regulations[1] shall be maintained and made available to the authorized officials for at least three years after the last shipment authorized by this certificate. Consignors in the United States exporting shipments under this certificate shall satisfy the applicable requirements of Subpart H of 10 CFR 71.

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[1] "Regulations for the Safe Transport of Radioactive Material, 1996 Edition (Revised), No. TS-R-1 (ST-1, Revised)," published by the International Atomic Energy Agency(IAEA), Vienna, Austria.

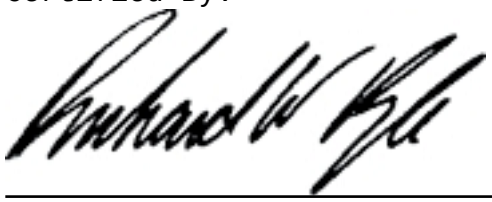
[2] Title 49, Code of Federal Regulations, Parts 100-199, United States of America.

CERTIFICATE USA/0161/S-96, REVISION 4

6. Expiration Date - This certificate expires on July 31, 2012. On June 30, 2008, this certificate supersedes all previous revisions of USA/0161/S-96.

This certificate is issued in accordance with paragraph 804 of the IAEA Regulations and Section 173.476 of Title 49 of the Code of Federal Regulations, in response to the March 21, 2008 petition by Eckert & Ziegler Isotope Products, Valencia, CA, and in consideration of other information on file in this Office.

Certified By:

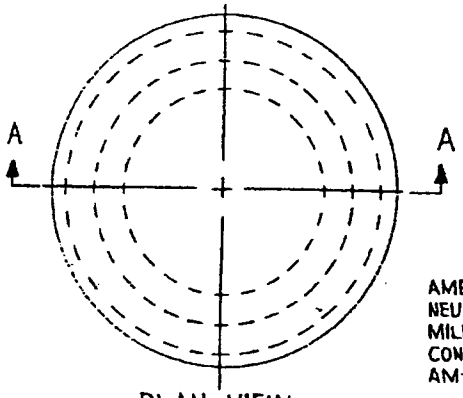


Robert A. Richard
Deputy Associate Administrator for Hazardous Materials Safety

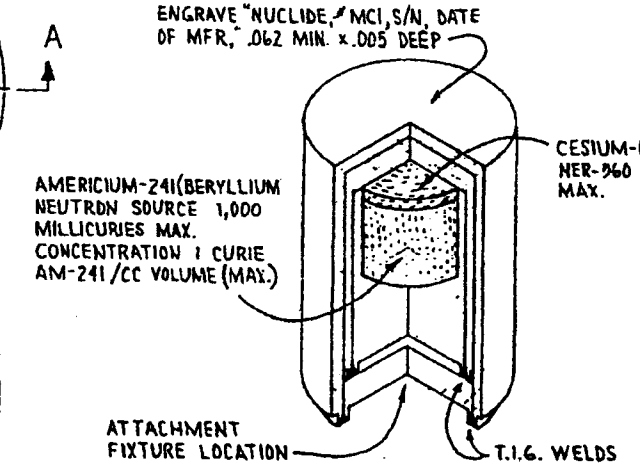
Mar 27 2008
(DATE)

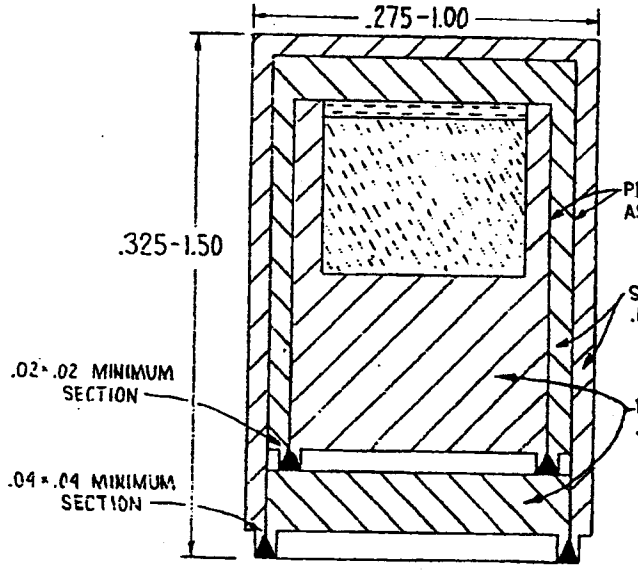
Revision 4 - Issued to add the Model NER-560-A.

DATE	SYM	REVISION RECORD	AUTH.	DR.	CK.
1/12/72		REDRAWN		J.S.	
2/10/72	A	ADD SPECIAL TEST NOTES		J.S.	



PLAN VIEW





SECTION A-A

NOTES

1. ANSI N5.10-1968 PERFORMANCE CLASSIFICATION C (< 300 MCI) OR E 54434
2. D.O.T. SPECIAL FORM PER 10 CFR 71.4
3. LEAK TEST PER ANSI N5.10-1968 PROCEDURES B2.1 AND B2.4
4. MODEL NO. WITH SUFFIX (-1 ETC.) FOR EACH CONFIGURATION AND SIZE.

RADIATIONS

$2.2\text{-}2.5 \times 10^3$ NEUTRONS/SEC./MCI AM-241
0.32 MR/HR./MCI CS-137 AT 1 METER.
(NER-560 ONLY)

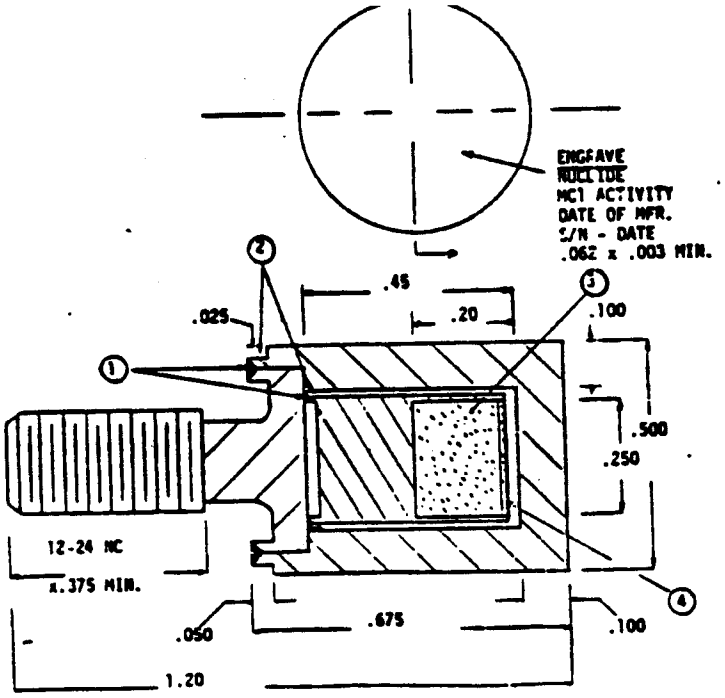
CAPSULE MAT'L: CRES 316L STAINLESS STEEL

SPECIAL TEST NOTES ⚠

1. INNER ENCAPSULATION ASS'Y TO BE THOROUGHLY DECONTAMINATED & LEAK TESTED PER ANSI N5.10-1968 PROCEDURE B2.4, PRIOR TO ENCAPSULATION IN OUTER ASS'Y.
2. PRODUCTION LEAK TEST B2.1 PER NOTE 3 TO BE MADE AFTER WELDING. HOLD SOURCE 7 DAYS MIN. & RETEST PER PROCEDURE B2.1. SMEAR TEST LIMIT 1×10^{-4} UCI AM-241 & CS-137.
3. ASSAY SMEARS FOR AM-241 BY ALPHA L.P.C. & CS-137 BY L.S.C.

TOLERANCES (EXCEPT AS NOTED)	NEW ENGLAND NUCLEAR CORP.		
DECIMAL ± .005		SCALE N.T.S.	DRAWN BY J. SUMARES
FRACTIONAL ± 1/64	TITLE NER-550 NEUTRON SOURCE & NER-560 NEUTRON GAMMA SOURCE		
ANGULAR ± 30'	DATE 12-3-71	DRAWING NUMBER 313-26	A

MODEL NER-560-A



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CERTIFICATE NUMBER: USA/0161/S-96, Revision 4

ORIGINAL REGISTRANT(S):

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